

Appln No. 10/581,782
Amdt date August 6, 2008
Reply to Office action of April 21, 2008

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A capacitive pressure sensing device comprising:
 - a base member;
 - a diaphragm member deflectable under an external pressure;
 - a cantilever member disposed between the base member and the diaphragm member and supported on a support structure; and
 - a contact member moveable relative to the cantilever member under deflection of the diaphragm member and separated by a gap from the cantilever member in a state when no pressure is applied to the diaphragm member,wherein the base member and the cantilever member form a capacitor structure of the device[[]], and
wherein deflection of the diaphragm member beyond a threshold value causes the contact member to contact the cantilever member causing the cantilever member to deflect to cause a capacitive change in the capacitor structure.
2. (Cancelled)
3. (Currently Amended) The device as claimed in claim 1[[2]], wherein the contact member is disposed on the base member.
4. (Currently Amended) The device as claimed in any one of claim 3[[1]], wherein the support structure supporting the cantilever member is disposed on the diaphragm member.

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5. (Currently Amended) The device as claimed in claim 1[[2]], wherein the contact member is disposed on the diaphragm member.

6. (Original) The device as claimed in claim 5, wherein the support structure supporting the cantilever member is disposed on the base member.

7. (Currently Amended) The device as claimed in any one of claim [[2]]1, wherein the contact member comprises a contact area disposed symmetrically around said support structure supporting the cantilever member.

8. (Original) The device as claimed in any one of claim 1, wherein the support structure supporting the cantilever member centrally supports the cantilever member.

9. (Original) The device as claimed in any one of claim 1, wherein the cantilever member comprises polysilicon.

10. (Original) The device as claimed in any one of claim 1, wherein the diaphragm member comprises polysilicon.

11. (Original) The device as claimed in any one of claim 1, wherein the base member comprises a silicon wafer.

12. (Original) The device as claimed in any one of claim 1, wherein the base member comprises a glass substrate.

13. (Currently Amended) The device as claimed in any one of claim [[2]]1, wherein the contact member comprises a nitride material.

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14. (Currently Amended) A method of pressure sensing comprising:

providing a contact member moveable relative to the cantilever member under deflection of a diaphragm member and separated by a gap from the cantilever member in a state when no pressure is applied to a diaphragm member; and

deflecting the [[a]] diaphragm member under an external pressure beyond a threshold value to cause the contact member to contact the cantilever member causing the [[a]] cantilever member to deflect under the influence of the diaphragm member,[[; and]]

wherein deflection of the cantilever member causes a capacitive change in a capacitive structure including the cantilever member.

15. (Currently Amended) A method of fabricating a pressure sensing device comprising:

forming a base member;

forming a diaphragm member deflectable under an external pressure;

forming a cantilever member disposed between the base member and the diaphragm member and supported on a support structure;

forming a contact member moveable relative to the cantilever member under deflection of the diaphragm member and separated by a gap from a cantilever member in a state when no pressure is applied to the diaphragm member;

wherein the base member and the cantilever member form a capacitor structure of the device; and

wherein deflection of the diaphragm member beyond a threshold value causes the contact member to contact the cantilever member causing the cantilever member to deflect to cause a capacitive change in the capacitor structure.

16. (Original) The method as claimed in claim 15, wherein forming the cantilever member comprises utilising thin film deposition techniques and sacrificial etching techniques.

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17. (Original) The method as claimed in claims 15, wherein forming the diaphragm member comprises utilising thin film deposition techniques and etching techniques.

18. (Original) The method as claimed in any one of claims 15, wherein forming the base member comprises providing a substrate.

19. (Original) The method as claimed in claim 18, wherein forming the base member comprises etching the substrate.